

# Device Errors

## Heating devices

### HOW TO AVOID BURNS

BY JOAN FERLO TODD, RN, BSN  
Nurse-Consultant  
Food and Drug Administration  
Center for Devices and Radiological Health  
Rockville, Md.

A PATIENT WITH ARTHRITIS SUFFERED A SECOND-DEGREE BURN to the hip after receiving treatment with a heating pad for pain. Set at low, the heating pad was left on for less than 20 minutes with the patient lying on top of the pad. Later testing showed that the pad was working properly and met the manufacturer's specifications.

#### What went wrong?

Therapeutic heating devices, such as heating pads, microwaveable hot packs, and hot-water bottles, although generally safe, can cause burns. Most burns result from improper use or use with inappropriate patients, such as infants and elderly patients. The severity of the burn is influenced by factors such as heat intensity, length of application, and the patient's age, medical history, and ability to sense pain.

#### What precautions can you take?

Follow these do's and don'ts to keep your patient safe when using heating devices:

- **DO** inspect the device before each use to ensure it's in proper condition.
- **DO** read directions and contraindications for use.
- **DO** use a protective cover.
- **DO** place the pad or pack on top of—not underneath—the patient.
- **DO** assess skin integrity frequently and adjust the therapy interval according to the patient's skin tolerance—no longer than 15 to 20 minutes.
- **DON'T** use the device on someone who's sleeping or unconscious, an infant, or a patient with altered mental status or decreased skin sensation (such as people with diabetes or compromised skin circulation).
- **DON'T** use pins to fasten the device in place.
- **DON'T** use with ointments or salve preparations containing heat-producing ingredients.
- **DON'T** use electrical heating devices in an oxygen-enriched environment or near oxygen-emitting equipment. ▀

Although you need to support the adverse-event reporting policy of your health care facility, you may voluntarily report a medical device that doesn't perform as intended by calling MedWatch at 1-800-FDA-1088 (fax: 1-800-FDA-0178). The opinions and statements contained in this report are those of the authors and may not reflect the views of the Department of Health and Human Services.